

AMENDMENTS TO THE CLAIMS

Please amend claims 1 and 11.

The following listing of claims replaces all versions, and listings, of claims in this application.

Listing of Claims:

1. (Currently Amended) A portable electronic device comprising an electrochemical cell, said cell comprising a positive electrode, a negative electrode and an electrolyte, wherein said positive electrode comprises a mesoporous structure having a periodic arrangement of substantially uniformly sized pores with a cross-section diameter in the order of 10^{-9} to 10^{-8} m.
2. (Previously Presented) A portable electronic device according to claim 1, wherein the mesoporous structure of the positive electrode is a metal, a metal oxide, a metal hydroxide or a combination thereof.
3. (Previously Presented) A portable electronic device according to claim 1, wherein the mesoporous structure of the positive electrode comprises a metal, a metal oxide, a metal hydroxide or a metal oxy-hydroxide, said metal oxide, metal hydroxide or metal oxy-hydroxide, forming a surface layer over said metal and extending over the pore surfaces.
4. (Previously Presented) A portable electronic device according to claim 1, wherein the mesoporous structure of the positive electrode comprises a metal that is nickel or nickel alloys.
5. (Previously Presented) A portable electronic device according to claim 1, wherein said mesoporous structure comprising a metal oxide, hydroxide or oxy-hydroxide is gold oxide; palladium oxide; nickel oxide (NiO); nickel hydroxide (Ni(OH)_2), nickel oxy-hydroxide (NiOOH) or ruthenium oxide.
6. (Previously Presented) A portable electronic device according to claim 1, wherein the mesoporous structure has a pore diameter in the range of about 1 to 10 nm.
7. (Previously Presented) A portable electronic device according to claim 1, wherein the mesoporous structure has a pore number density of about 4×10^{11} to 3×10^{13} pores per cm^2 .

8. (Previously Presented) A portable electronic device according to claim 1, wherein at least 85 % of the pores in said mesoporous structure have pore diameters within 30 % of the average pore diameter.
9. (Previously Presented) A portable electronic device according to claim 1, wherein the mesoporous structure has a hexagonal arrangement of pores that are continuous through the thickness of the electrode.
10. (Previously Presented) A portable electronic device according to claim 9, wherein the hexagonal arrangement of pores has a pore periodicity in the range of 5 to 9 nm.
11. (Currently Amended) A portable electronic device according to claim 1, wherein the negative electrode comprises a mesoporous structure having a periodic arrangement of substantially uniformly sized pores with a cross-section diameter in the order of 10^{-9} to 10^{-8} m,
12. (Previously Presented) The portable electronic device of claim 1, wherein said mesoporous structure is a film having a thickness in the range of about 0.5 to about 5 micrometers.
13. (Previously Presented) The portable electronic device of claim 1, wherein said negative electrode comprises a material that is carbon, cadmium, iron, a palladium/nickel alloy, an iron/titanium alloy, palladium, or LaNi_5H_x .
14. (Previously Presented) The portable electronic device of claim 1, wherein said negative electrode comprises a material that is carbon or palladium.
15. (Previously Presented) The portable electronic device of claim 1, wherein said mesoporous structure comprises nickel and a nickel oxide, a nickel hydroxide or a nickel oxy-hydroxide that is NiO , $\text{Ni}(\text{OH})_2$ and NiOOH , said nickel oxide, nickel hydroxide, or nickel oxy-hydroxide forming a surface layer over said nickel and extending over the pore surfaces, and wherein said negative electrode has a mesoporous structure comprised of carbon or palladium.
16. (Previously Presented) The portable electronic device of claim 15, wherein said negative electrode comprises nanoparticulate carbon.

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17. (Previously Presented) The portable electronic device of claim 1, wherein said cell is constructed to function as a battery, as a supercapacitor or a combination thereof.
18. (Previously Presented) A portable electronic device according to claim 6, wherein the mesoporous structure has a pore diameter in the range of about 2.0-8.0 nm.
19. (Previously Presented) A portable electronic device according to claim 7, wherein the mesoporous structure has a pore number density of 1×10^{12} to 1×10^{13} pores per cm^2 .
20. (Previously Presented) The portable electronic device of claim 8, wherein at least 85 % of the pores in said mesoporous structure have pore diameters to within 10 % of the average pore diameter.
21. (Previously Presented) The portable electronic device of claim 8, wherein at least 85 % of the pores in said mesoporous structure have pore diameters to within 5 % of the average pore diameter.
22. (Previously Presented) The portable electronic device of claim 4, wherein said Nickel alloys are alloys with a transition metal, nickel/cobalt alloys, iron/nickel alloys, cobalt, platinum, palladium or ruthenium.